Claims

1. In a communication system that includes a service provider and a plurality of subscribers, a method for processing services comprises the steps of:

a) determining whether the service provider is capable of supporting at least one service for one of the plurality of subscribers;

b) when the service provider is capable of supporting the at least one service, providing, by the one of the plurality of subscribers, service processing logic to the service provider; and

c) executing, by the service provider, the service processing logic to provide the at least one service to the one of the plurality of subscribers based on the service processing logic when the at least one service has been requested.

2. The method of claim 1 further comprises, within step (a), determining whether the service provider is capable of supporting the at least one service when the one of the plurality of subscribers provides at least one of: a service registration to the service provider and a service invocation to the service provider.

3. The method of claim 1 further comprises, within step (a):

receiving, by the one of the plurality of subscribers, an indication of capabilities of the service provider; and

determining, by the one of the plurality of subscribers, whether the service provider is capable of supporting the at least one service based on the indication.

5 4.   The method of claim 1 further comprises, within step (a):

receiving, by the service provider, an indication of service requirements of the one of the plurality of subscribers; and

10 determining, by the service provider, whether the service provider is capable of supporting the at least one service based on the indication.

5.   The method of claim 1 further comprises, within step (b):

15 determining the service provider to be capable when the service provider includes a service application; and

providing the service processing logic to include custom user
20 parameters, wherein the custom user parameters modify the service application to meet customization requirements of the one of the plurality of subscribers.

6.   The method of claim 1 further comprises, within step (b):
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determining the service provider to be capable when the service provider has sufficient processing and memory; and

providing the service processing logic to include a service
30 application and custom user parameters that relate to the at least one service.

7.   The method of claim 6 further comprises queuing the at least one service when at least one of: the service provider has insufficient processing and memory and the communication system has insufficient communication resources.

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8.   The method of claim 1 further comprises deleting, by the service provider, the service processing logic based on deletion parameters, wherein the deletion parameters include at least one of: a time out period, service priority, processing and memory availability, number of times the at least one service has been executed exceeds a threshold, and lack of activity.

9.   The method of claim 1 further comprises:

15   receiving, by the service provider, a command from a subscriber of the plurality of subscribers;   and

disabling, by the service provider, the service processing logic in response to the command when the subscriber is authorized to
20   command disablement of the service processing logic.

10.   The method of claim 9 further comprises disabling the service processing logic by at least one of: erasure and inactivation.

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11.   The method of claim 10 further comprises, when the service processing logic was disabled by inactivation, subsequently receiving a second command from the subscriber to reactivate the service processing logic.

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12.   The method of claim 1 further comprises determining that the service provider is capable of supporting the at least one

service when the service provider has been authenticated by the one of the plurality of subscribers.

13.   In a communication system that includes a service provider and a plurality of subscribers, a method for processing services comprises the steps of:

5   a)   providing, by one of the plurality of subscribers, service processing logic to the service provider, wherein the service processing logic includes at least one of: a service application and custom user parameters;

10   b)   maintaining, by the service provider, the service processing logic;   and

c)   executing, by the service provider, the service processing logic to provide at least one service for the one of the plurality

15   of subscribers when the at least one service has been requested and when the service provider is capable.

14.   The method of claim 13 further comprises, within step (c), determining the service provider to be capable when the service

20   provider has sufficient processing and memory.

15.   The method of claim 14 further comprises queuing the at least one service when the service provider has insufficient processing and memory.

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16.   The method of claim 13 further comprises deleting, by the service provider, the service processing logic based on deletion parameters, wherein the deletion parameters include at least one of: a time out period, service priority, processing and memory

30   availability, and number of times the at least one service has been executed exceeds a threshold, and lack of activity.

17. The method of claim 18 further comprises:

receiving, by the service provider, a command from a subscriber of the plurality of subscribers; and

disabling, by the service provider, the service processing logic in response to the command when the subscriber is authorized to command disablement of the service processing logic.

18. The method of claim 13 further comprises determining that the service provider is capable of supporting the at least one service when the service provider has been authenticated by the one of the plurality of subscribers.

19.   In a communication system that includes a service provider and a plurality of subscribers, a method for a subscriber unit of the plurality of subscriber units to facilitate processing of services, the method comprises the steps of:

a)   determining whether the service provider is capable of supporting at least one service for the subscriber unit;

b)   when the service provider is capable of supporting the at least one service, providing service processing logic to the service provider; and

c)   requesting processing of the at least one service.

20.   The method of claim 19 further comprises, within step (b), providing the service processing logic at, at least one of: service registration of the subscriber unit and service invocation by the subscriber unit.

21.   The method of claim 19 further comprises, within step (b), providing the service processing logic to include at least one of:

a maintenance duration, wherein the maintenance duration includes at least one of: a minimum maintenance time and a maximum maintenance time, wherein the service provider maintains the service processing logic for the maintenance duration;

interworking information, wherein the interworking information directs the service provider on how to interconnect with other entities within the communication system and with other communication systems;

home location information for the subscriber unit;

a first command for exclusive processing of the service processing logic for the one of the plurality of subscribers;

a second command for group processing of the service processing logic for a group of subscribers associated with the subscriber unit;

a third command for non-restricted processing of the service processing logic for any of the plurality of subscribers; and

a fourth command for individually selective processing of the service processing logic for selected subscribers of the plurality of subscribers.

22. In a communication system that includes a service provider and a plurality of subscriber units, a method for a subscriber unit of the plurality of subscriber units to facilitate processing of services, the method comprises the steps of:

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a) providing service processing logic to the service provider, wherein the service processing logic includes at least one of: service application and custom user parameters; and

10 b) requesting processing of at least one service, wherein the at least one service is processed based on the service processing logic.

23. The method of claim 22 further comprises, within step (a),
15 providing the service processing logic at, at least one of: service registration of the subscriber unit and service invocation by the subscriber unit.

24.   In a communication system that includes a service provider and a plurality of subscribers, a method for the service provider to facilitate processing services, the method comprises the steps of:

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a)   participating in a determination as to whether the service provider is capable of supporting at least one service for one of the plurality of subscribers;

10   b)   when the service provider is capable, receiving service processing logic; and

c)   executing the service processing logic to provide the at least one service for one of the plurality of subscribers when the
15   one of the plurality of subscribers requests the at least one service.

25.   The method of claim 24 further comprises, within step (a),

20   providing an indication of capabilities of the service provider to the one of the plurality of subscribers.

26.   The method of claim 24 further comprises, within step (a):

25   receiving an indication of service requirements of the one of the plurality of subscriber units; and

determining whether the service provider is capable of supporting the at least one service based on the indication.

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27.   The method of claim 24 further comprises, within step (b):

determining the service provider to be capable when the service provider includes a service application; and

receiving the service processing logic to include custom user parameters, wherein the custom user parameters modify the service application to meet customization requirements of the one of the plurality of subscribers.

28.   The method of claim 24 further comprises, within step (b):

determining the service provider to be capable when the service provider has sufficient processing and memory; and

receiving the service processing logic to include a service application and custom user parameters that relate to the at least one service.

29.   The method of claim 28 further comprises queuing the at least one service when the service provider has insufficient processing and memory.

30.   The method of claim 24 further comprises deleting the service processing logic based on deletion parameters, wherein the deletion parameters include at least one of: a time out period, service priority, processing and memory availability, number of times the at least one service has been executed exceeds a threshold, and lack of activity.

31.   The method of claim 24 further comprises:

receiving a command from a subscriber of the plurality of subscribers; and

disabling the service processing logic in response to the command when the subscriber is authorized to command disablement of the service processing logic.

32.   In a communication system that includes a service provider and a plurality of subscribers, a method for the service provider to facilitate processing services, the method comprises the steps of:

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a)   receiving service processing logic from one of the plurality of subscribers, wherein the service processing logic includes at least one of: service application and custom user parameters;   and

10   b)   receiving a request for processing of at least one service, wherein the at least one service is processed based on the service processing logic.

33.   The method of claim 32 further comprises, within step (a),
15   receiving the service processing logic at, at least one of: service registration of one of the plurality of subscribers and service invocation by the one of the plurality of subscribers.

34.   A subscriber comprising:

a processing unit; and

5   memory operably coupled to the processing unit, wherein the memory stores programming instructions that, when read by the processing unit, cause the processing unit to function as circuits that: (a) determine whether a service provider is capable of supporting at least one service for the subscriber;   (b) provide

10   service processing logic to the service provider when the service provider is capable of supporting the at least one service; and   (c) request processing of the at least one service.

35.   The subscriber of claim 34 further comprises, within the
15   memory, programming instructions that, when read by the processing unit, cause the processing unit to function as a circuit that provides the service processing logic at, at least one of: service registration of the subscriber and service invocation by the subscriber.

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36.   The subscriber of claim 34 further comprises, within the memory, programming instructions that, when read by the processing unit, cause the processing unit to function as a circuit that provides the service processing logic to include at least one
25   of:

a maintenance duration, wherein the maintenance duration includes at least one of: a minimum maintenance time and a maximum maintenance time, wherein the service provider
30   maintains the service processing logic for the maintenance duration;

interworking information, wherein the interworking information directs the service provider on how to interconnect with other entities within a communication system and with other communication systems;

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home location information for the subscriber;

a first command for exclusive processing of the service processing logic for the subscriber;

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a second command for group processing of the service processing logic for a group of subscribers associated with the subscriber;

15   a third command for non-restricted processing of the service processing logic for any of a plurality of subscribers; and

a fourth command for individually selective processing of the service processing logic for selected subscribers of the

20   plurality of subscribers.

37.   A subscriber comprising:

a processing unit;   and

5   memory operably coupled to the processing unit, wherein the
memory stores programming instructions that, when read by the
processing unit, cause the processing unit to function as circuits
that: (a) provide service processing logic to a service provider,
wherein the service processing logic includes at least one of:
10   service application and custom user parameters;   and   (b) request
processing of at least one service, wherein the at least one
service is processed based on the service processing logic.

38.   The subscriber of claim 37 further comprises, within the
15   memory, programming instructions that, when read by the
processing unit, cause the processing unit to function as a circuit
that provides the service processing logic at, at least one of:
service registration of the subscriber and service invocation by
the subscriber.

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39.   A service provider comprising:

a processing unit;   and

5   memory operably coupled to the processing unit, wherein the memory stores programming instructions that, when read by the processing unit, cause the processing unit to function as circuits that: (a) participate in a determination as to whether the service provider is capable of supporting at least one service for one of a
10   plurality of subscribers;   (b) receive service processing logic when the service provider is capable;   and   (c) execute the service processing logic to provide the at least one service for the one of the plurality of subscribers when the one of the plurality of subscribers requests the at least one service.

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40.   The service provider of claim 39 further comprises, within the memory, programming instructions that, when read by the processing unit, cause the processing unit to function as a circuit that provides an indication of capabilities of the service provider
20   to the one of the plurality of subscribers.

41.   The service provider of claim 39 further comprises, within the memory, programming instructions that, when read by the processing unit, cause the processing unit to function as a circuit
25   that: receives an indication of service requirements of the one of the plurality of subscribers; and determines whether the service provider is capable of supporting the at least one service based on the indication.

30   42.   The service provider of claim 39 further comprises, within the memory, programming instructions that, when read by the processing unit, cause the processing unit to function as a circuit

that: determines the service provider to be capable when the service provider includes a service application; and receives the service processing logic to include custom user parameters, wherein the custom user parameters modify the service

5 application to meet customization requirements of the one of the plurality of subscribers.

43. The service provider of claim 39 further comprises, within the memory, programming instructions that, when read by the

10 processing unit, cause the processing unit to function as a circuit that: determines the service provider to be capable when the service provider has sufficient processing and memory; and receives the service processing logic to include a service application and custom user parameters that relate to the at

15 least one service.

44. The service provider of claim 43 further comprises, within the memory, programming instructions that, when read by the processing unit, cause the processing unit to function as a circuit

20 that queues the at least one service when the service provider has insufficient processing and memory due to processing another service request.

45. The service provider of claim 39 further comprises, within

25 the memory, programming instructions that, when read by the processing unit, cause the processing unit to function as a circuit that deletes the service processing logic based on deletion parameters, wherein the deletion parameters include at least one of: a time out period, service priority, and processing and memory

30 availability.

46. The service provider of claim 39 further comprises, within the memory, programming instructions that, when read by the processing unit, cause the processing unit to function as a circuit that: receives a command from the one of the plurality of subscribers; and disables the service processing logic in response to the command when the subscriber is authorized to command disablement of the service processing logic.

47. A service provider comprising:

a processing unit; and

5   memory operably coupled to the processing unit, wherein the
      memory stores programming instructions that, when read by the
      processing unit, cause the processing unit to function as circuits
      that: (a) receive service processing iogic from one of a plurality
      of subscribers, wherein the service processing logic includes at
10   least one of: service application and custom user parameters; and
      (b) receive a request for processing of at least one service,
      wherein the at least one service is processed based on the
      service processing logic.

15   48. The service provider of claim 47 further comprises, within
      the memory, programming instructions that, when read by the
      processing unit, cause the processing unit to function as a circuit
      that receives the service processing logic at, at least one of:
      service registration of the one of the plurality of subscribers and
20   service invocation by the one of the plurality of subscribers.